

NASA/SPoRT's GOES-R Activities in Support of Product Development, Management, and Training

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The NASA Short-term Prediction Research and Transition (SPoRT) Center supports many activities within the GOES-R Proving Grounds (PG). These include the development of imagery from existing instrumentation as a proxy to future Advanced Baseline Imager (ABI) capabilities on GOES-R. The Moderate Resolution Imaging Spectroradiometer (MODIS) and the Visible/Infrared Imager/Radiometer Suite (VIIRS) instruments are used to provide a glimpse of the multi-spectral capabilities that will become the norm as the number of channels and data rate dramatically increase with GOES-R. The NOAA/NWS has plans to provide operational users with all ABI channels at the highest resolution. Data fusion of individual channels into composite red, green, and blue imagery products will assist the end user with this future wave of information. While increasing the efficiency in the operational use of ABI channels, these composites provide only qualitative information. Within the GOES-R PG, SPoRT and other partners are exploring ways to include quantitative information as part of the composite imagery. However, limitations in local hardware processing and/or data bandwidth for users of the GOES-R data stream are challenges to overcome. This presentation will discuss the creation of these composite images as well as possible solutions to address these processing challenges.

In a similar manner the Geostationary Lightning Mapper (GLM) to be launched on GOES-R presents several data management challenges. The GLM is a pioneering instrument to quantify total lightning from a geostationary platform. The expected data frequency from the GLM is to be at a sub-minute interval. Users of such a data set may have little experience in handling such a rapid update of information. To assist users, SPoRT is working with the NWS to develop tools within the user's decision support system to allow tracking and analysis of total lightning from a storm-based perspective. This presentation will discuss the challenges and progress of this tool development work.

With new data and products comes the need for user Training. Within the GOES-R PG SPoRT is supporting the demonstration of these future products by providing various training materials to end users. A summary of training provided to operational users will be discussed.